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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/743,842 | 12/22/2003 | Markus Frank | 095309.53051US | 9079 |

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EXAMINER

LE, TUNG X

ART UNIT PAPER NUMBER

2821

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/743,842 | Applicant(s) FRANK ET AL. | |
| | Examiner Tung X. Le | Art Unit 2821 | |

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-29 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/22/2003</u> <u>06/04/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is a response to the applicant's filing on December 22, 2003. In virtue of this filing, claims 1-29 are currently presented in the instant application.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

Claim 1, in lines 3, 6, and 13, "signalling" should be corrected to --signaling--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6-17, and 20-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Fritz et al. (U.S. 5,805,061).

Regarding claim 1, Fritz discloses, in figure 1, a control device for signal lamps (19) of a vehicle (column 1, lines 8-13) comprising (a) a signaling circuit (figure 1) for generating an intermittent signal current as load current for the signal lamps (19), and (b) a signal switch (17,17',17'', 21) for activating the signaling circuit, wherein (c) a clock circuit (16) is provided which controls the load current of at least two signal lamps (19) individually in each case with the aid of a prescribed clock sequence (figures 6 and 7), and (d) acting as an operating voltage source for the clock circuit (see table 1 and table

2), the signaling circuit (figure 1) feeds the clock circuit the intermittent signal current (column 6, lines 31-54).

Regarding claim 2, Fritz discloses that the clock circuit is designed as a microcontroller (16) and a clock sequence (figures 6-7) can be programmed for each signal lamp to be driven by the microcontroller (figure 1).

Regarding claim 3, Fritz discloses that the purpose of being driven with the aid of the prescribed clock sequence each signal lamp (19) is connected to an output stage circuit (21), and these output stage circuits are driven via the control outputs of the microcontroller (16) (figure 1).

Regarding claim 6, Fritz discloses in figure 1 the clock sequences prescribed for the respective load current in the case of the signal lamps driven by the clock circuit (column 10, lines 61-67).

Regarding claim 7, Fritz discloses, in figure 1, that the signaling circuit is designed as a flasher circuit, and the signal switch (21) is designed as a turn flasher switch (column 5, lines 5-18).

Regarding claim 8, Fritz discloses, in figure 1, that a further signal switch (20) is designed as a hazard warning switch (column 5, lines 5-18).

Regarding claim 9, Fritz discloses that the load current, clocked by the prescribed clock sequence, of the signal lamps is pulse-width-modulated during the time of their bright phase (figures 4-7).

Regarding claim 10, Fritz discloses that a mirror-mounted flasher (19) having a plurality of signal lamps in the case of which the clock circuit is also arranged on a carrier board in addition to the signal lamps (figure 2A).

Regarding claim 11, Fritz discloses in figure 1 a vehicle lighting system comprising a first switching element (17, 17', 17'', 20); a first control device (16) to generate a first signal in response to the state of the first switching element (column 4, lines 25-39); an electroluminescent device (19); and a second control (21) to generate a second signal for driving the electroluminescent device in response to the first signal (figures 1-1A).

Regarding claim 12, Fritz discloses that the first switching element comprises a one-pole-two-throw switch (element [17'']) related to the turn in signal of the switch [21]) used to selectively indicate a direction of turning of a vehicle (see figure 1).

Regarding claim 13, Fritz discloses that the electroluminescent device (19) comprises a left-turn-indicating electroluminescent device and a right-turn indicating electroluminescent (column 9, lines 40-55).

Regarding claim 14, Fritz discloses that the first switching element comprises a two-pole-two-throw switch (20) used to selectively indicate a hazard situation related to a vehicle (figure 1).

Regarding claim 15, Fritz discloses that the electroluminescent device (19) comprises a first and a second hazard-indicating electroluminescent device (figure 1).

Regarding claim 16, Fritz discloses that the first control device (16) comprises a microprocessor (figure 3).

Regarding claim 17, Fritz discloses in figures 6-7 that the first signal is substantially periodic (column 10, lines 61-67).

Regarding claim 20, Fritz discloses in figure 1A that the second control device comprises a microcontroller (T1'-T2').

Regarding claim 21, Fritz discloses, in figures 6-7, that the electroluminescent device comprises a plurality of electroluminescent devices (19), and wherein the second signal drives the plurality of electroluminescent devices in a predetermined time pattern (column 12, lines 28-37).

Regarding claim 22, Fritz discloses that the second control device (T1'-T2') pulse-width-modulates the second signal to control a brightness of the electroluminescent device (figure 1A).

Regarding claim 23, Fritz discloses a method of activating a vehicle lighting system comprising generating a first signal in response to a state of a first switching element (17, 17', 17''); generating a second signal (21) in response to the first signal; and activating an electroluminescent device (19) using the second signal (figure 1).

Regarding claim 24, Fritz discloses, in figure 1, that the electroluminescent device (19) is used to indicate that a vehicle is turning left or right (column 9, lines 40-55).

Regarding claim 25, Fritz discloses that the electroluminescent device (19) is used to indicate a hazard condition (20) related to a vehicle (figure 1).

Regarding claim 26, Fritz discloses that the first signal is substantially periodic (column 10, lines 61-67).

Regarding claim 27, Fritz discloses, in figures 6-7, that the electroluminescent device comprises a plurality of electroluminescent devices (19), and wherein the second signal drives the plurality of electroluminescent devices in a predetermined time pattern (column 12, lines 28-37).

Regarding claim 28, Fritz discloses that the second control device (T1'-T2') pulse-width-modulates the second signal to control a brightness of the electroluminescent device (figure 1A).

Regarding claim 29, Fritz discloses, in figure 1, that the second signal (21) comprises pulse-width modulating the second signal (figures 6-7).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz et al. (U.S. 5,805,061) in view of Smithson (U.S. 2004/0257214 A1).

Regarding claim 18, Fritz discloses every feature of the claimed invention, excluding a light emitting diode of the signal lamp of the vehicle.

Smithson discloses in figure 3 a light emitting diode (39) of the vehicle signal lamp in order for achieving a less damage from shock and vibration and a less power consumption of the vehicle signal lamp (paragraph [0006]).

Since one of ordinary skill in the art would recognize the benefit of achieving a less damage from shock and vibration and a less power consumption of the vehicle signal lamp, it would have been obvious to provide Fritz with a light emitting diode of the vehicle signal lamp as taught by Smithson.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz et al. (U.S. 5,805,061) in view of Stam et al. (U.S. 2006/0018511 A1).

Regarding claim 19, Fritz discloses every feature of the claimed invention, excluding an incandescent device of the vehicle signal lamp.

Stam discloses an incandescent device (figure 2a) of the vehicle signal lamp in order for emitting the infrared light to balance out the detected brightness of high speeding vehicle signal lamp (paragraph [0106]).

Since one of ordinary skill in the art would recognize the benefit of emitting the infrared light to balance out the detected brightness of high speeding vehicle signal lamp, it would have been obvious to provide Fritz with an incandescent device of the vehicle signal lamp as taught by Stam.

Allowable Subject Matter

8. Claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

- The output stage circuits are designed as low-side switches, each signal lamp being connected, on the one hand, to the associated output stage circuit and, on the other hand, via a series resistor to the signaling circuit for the purpose of feeding the intermittent signal current.
- The output stage circuits are designed as high-side switches, each signal lamp being connected, on the one hand, to the associated output stage circuit and, on the other hand, to the reference potential of the control circuit.

Citation of Relevant Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bruwer (U.S. 6,621,225 B2) discloses an intelligent electrical switching devices;
Fritz et al. (U.S. 6,243,009 B1) discloses a method and circuit arrangement for comparing output signals with reference signals having different reference levels;

Adell (U.S. 5,347,261) discloses a having free vehicle bright light signal system;
Freeman et al. (U.S. 5,231,373) discloses a multi-level illumination control system for automotive signalling use;

Onan et al. (U.S. 4,972,174) discloses a motorcycle turn signal control circuit;
Hatanaka et al. (U.S. 4,910,496) discloses a direction indicating flasher device for vehicles with filament failure indication; and

Kruse et al. (U.S. 4,845,465) discloses a multiplexed D.C. electrical system for automotive vehicles.


Inquiry

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X. Le whose telephone number is 571-272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner
Tung Le
AU 2821


TUYET VO
PRIMARY EXAMINER